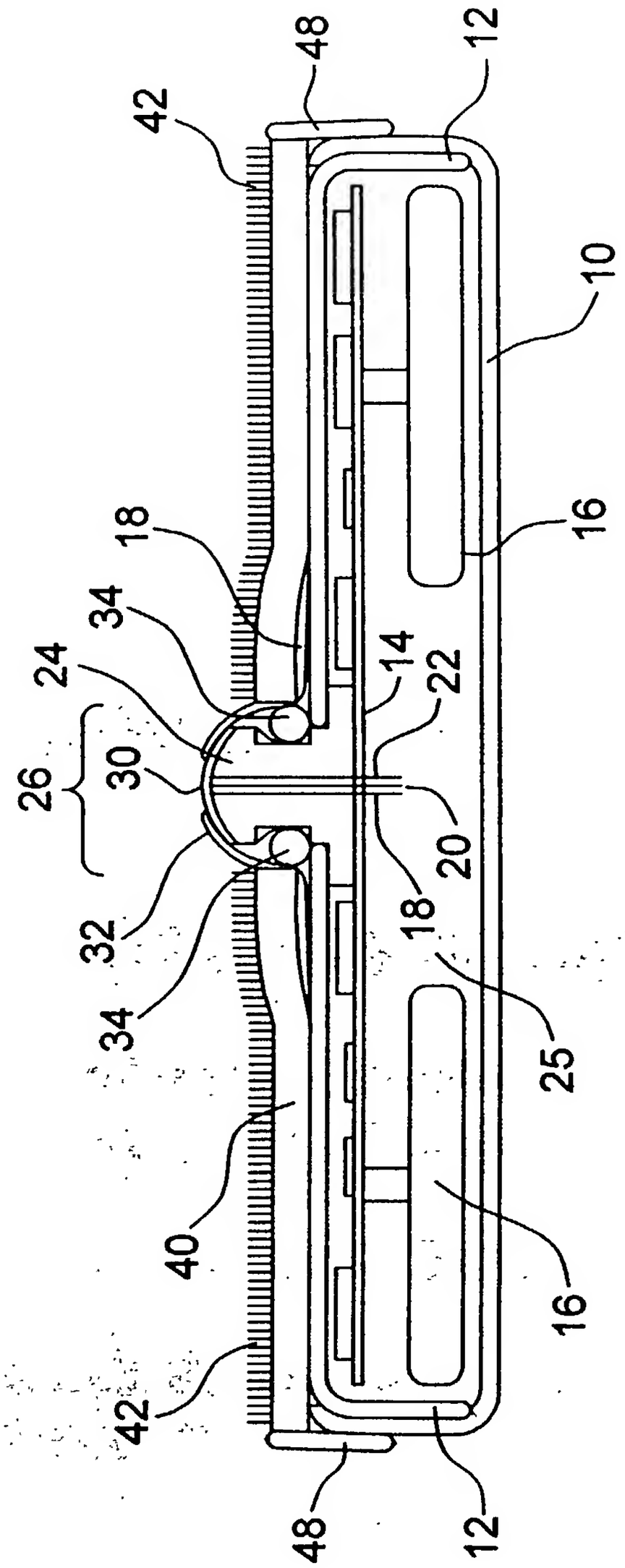

Figure 1

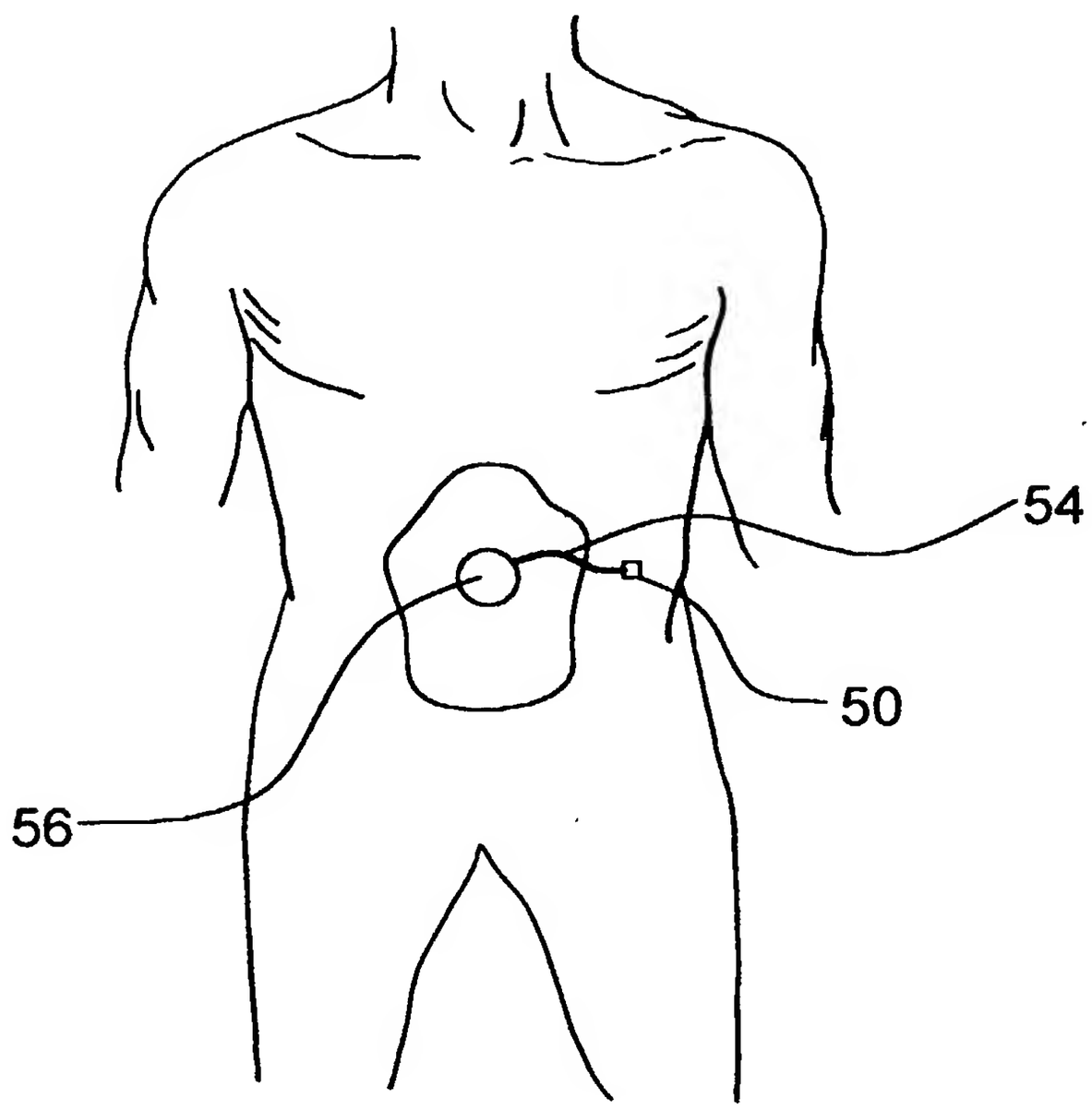

Figure 2

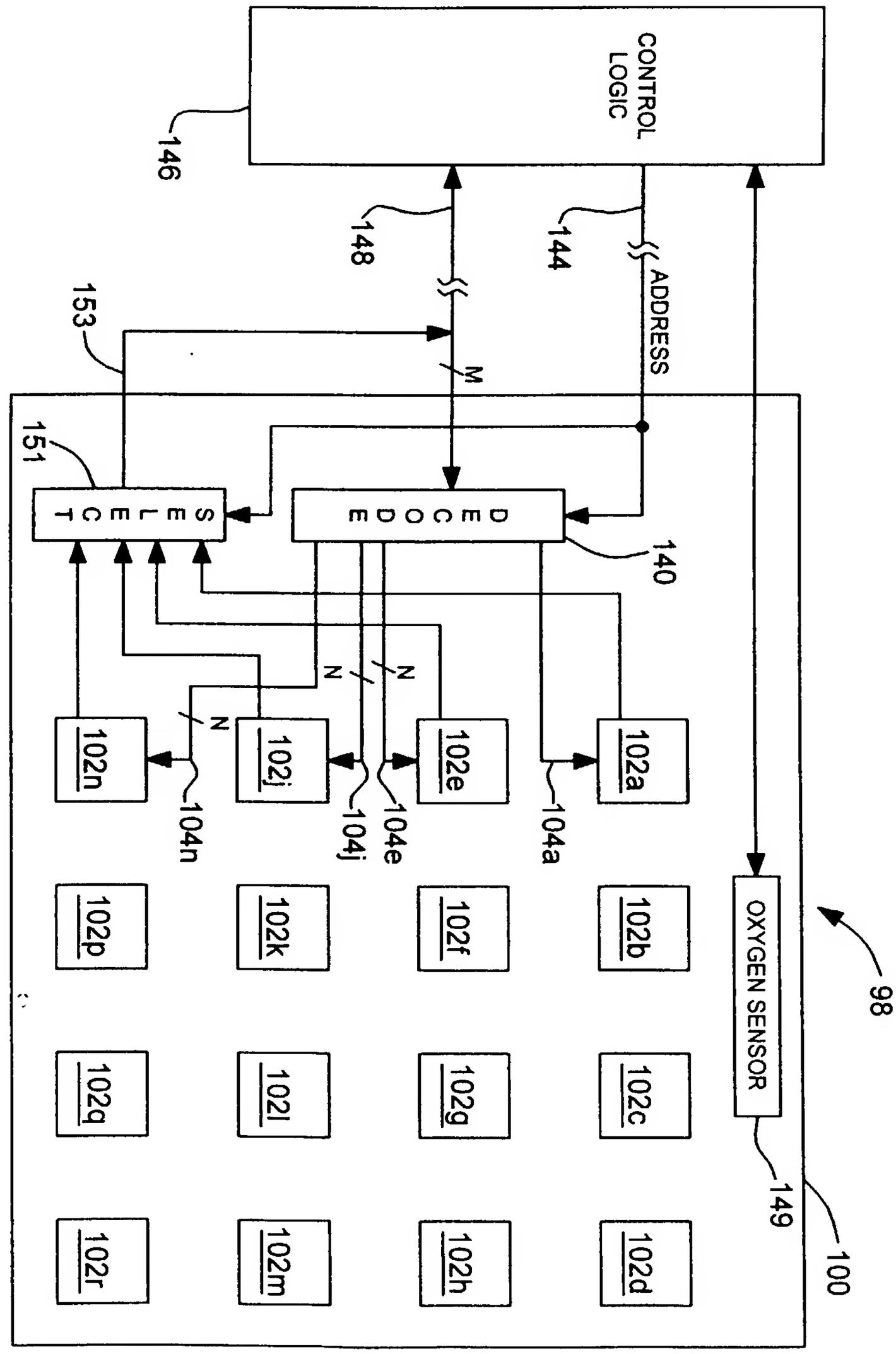
CONTROL LOGIC
146
148
144
ADDRESS
153
M
151
SELECT
DECODE
140
N
102n
102j
102e
102a
104n
104j
104e
104a
102p
102k
102f
102b
102q
102l
102g
102c
102r
102m
102h
102d
OXYGEN SENSOR
149
98
100

Figure 3

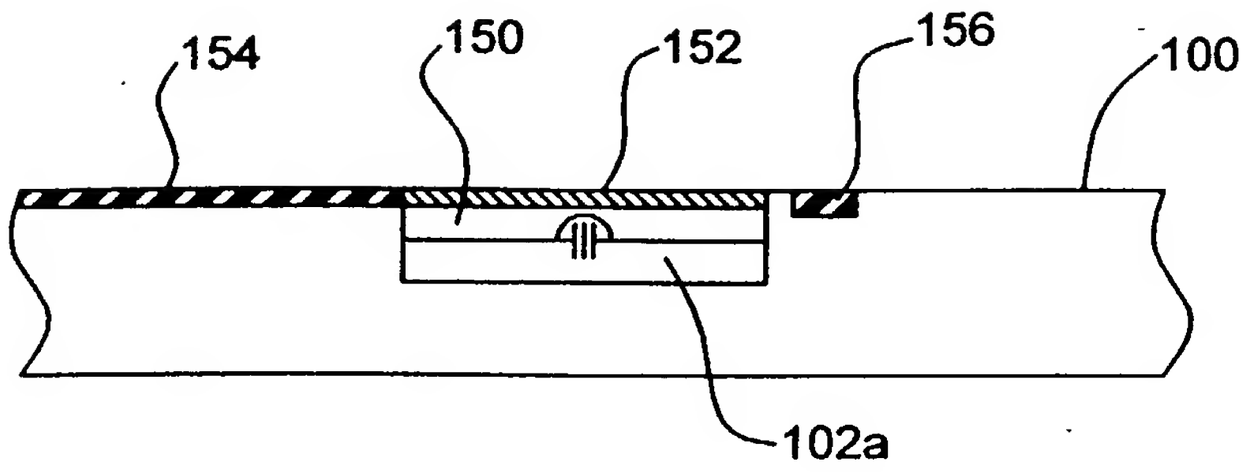

Figure 4A

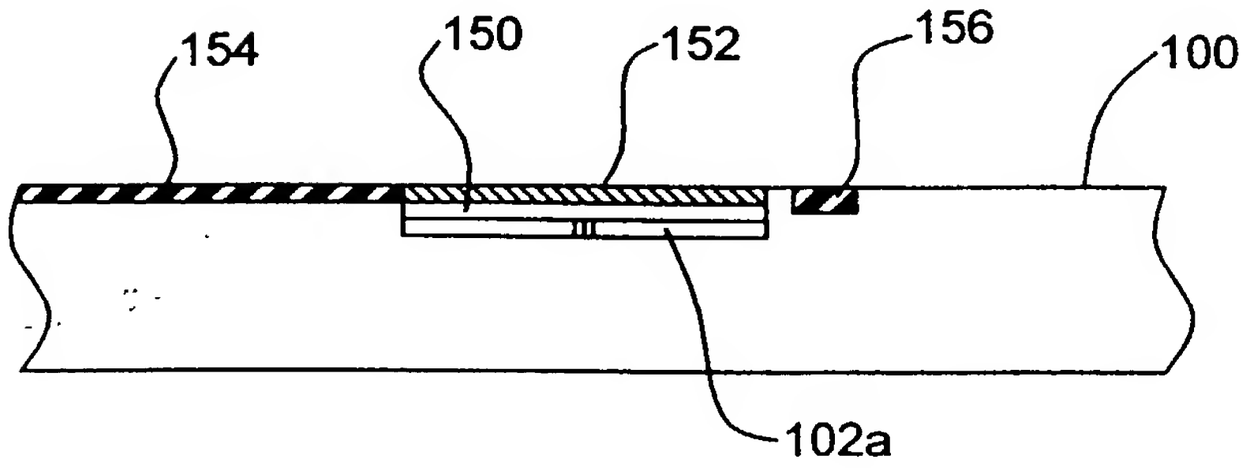

Figure 4B

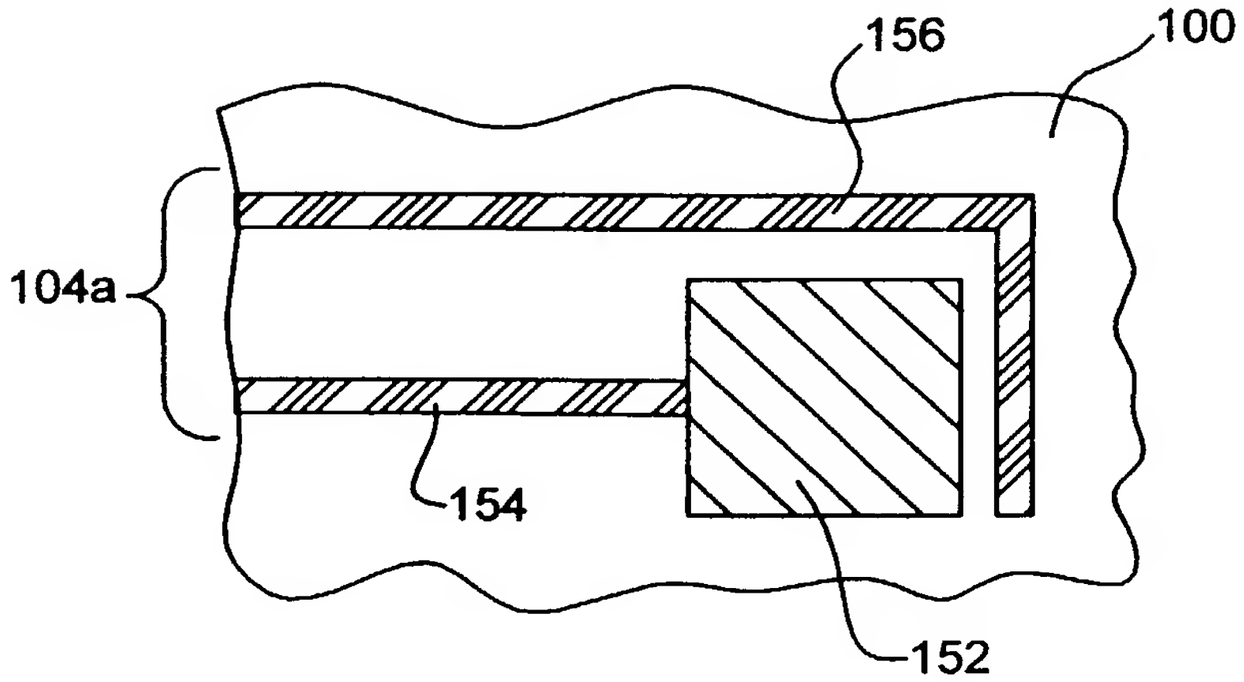

Figure 5

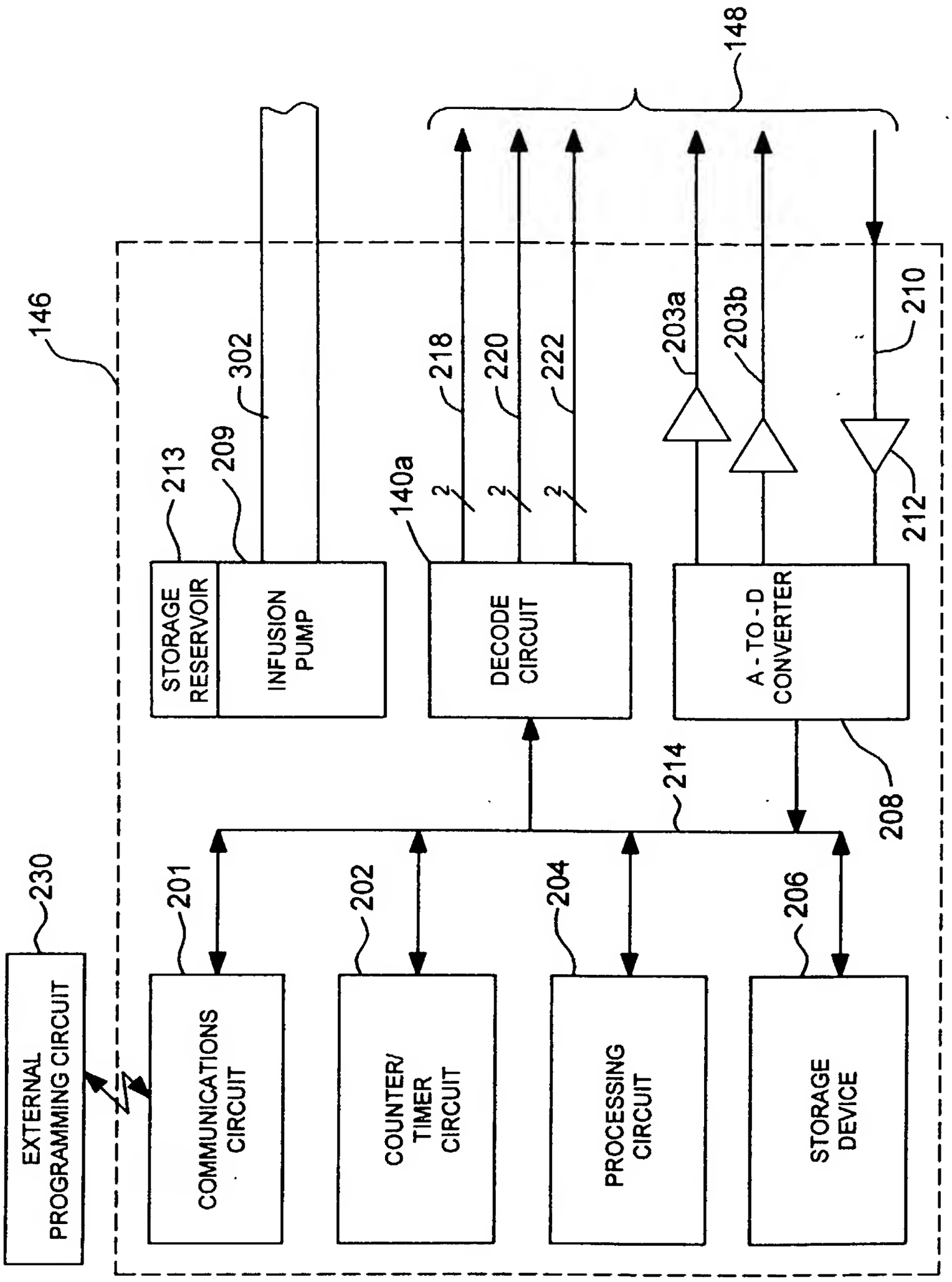
148
146
302
218
220
222
203a
203b
210
213
209
140a
212
STORAGE RESERVOIR
INFUSION PUMP
DECODE CIRCUIT
A - TO - D CONVERTER
214
208
230
201
202
204
206
EXTERNAL PROGRAMMING CIRCUIT
COMMUNICATIONS CIRCUIT
COUNTER/ TIMER CIRCUIT
PROCESSING CIRCUIT
STORAGE DEVICE

Figure 6

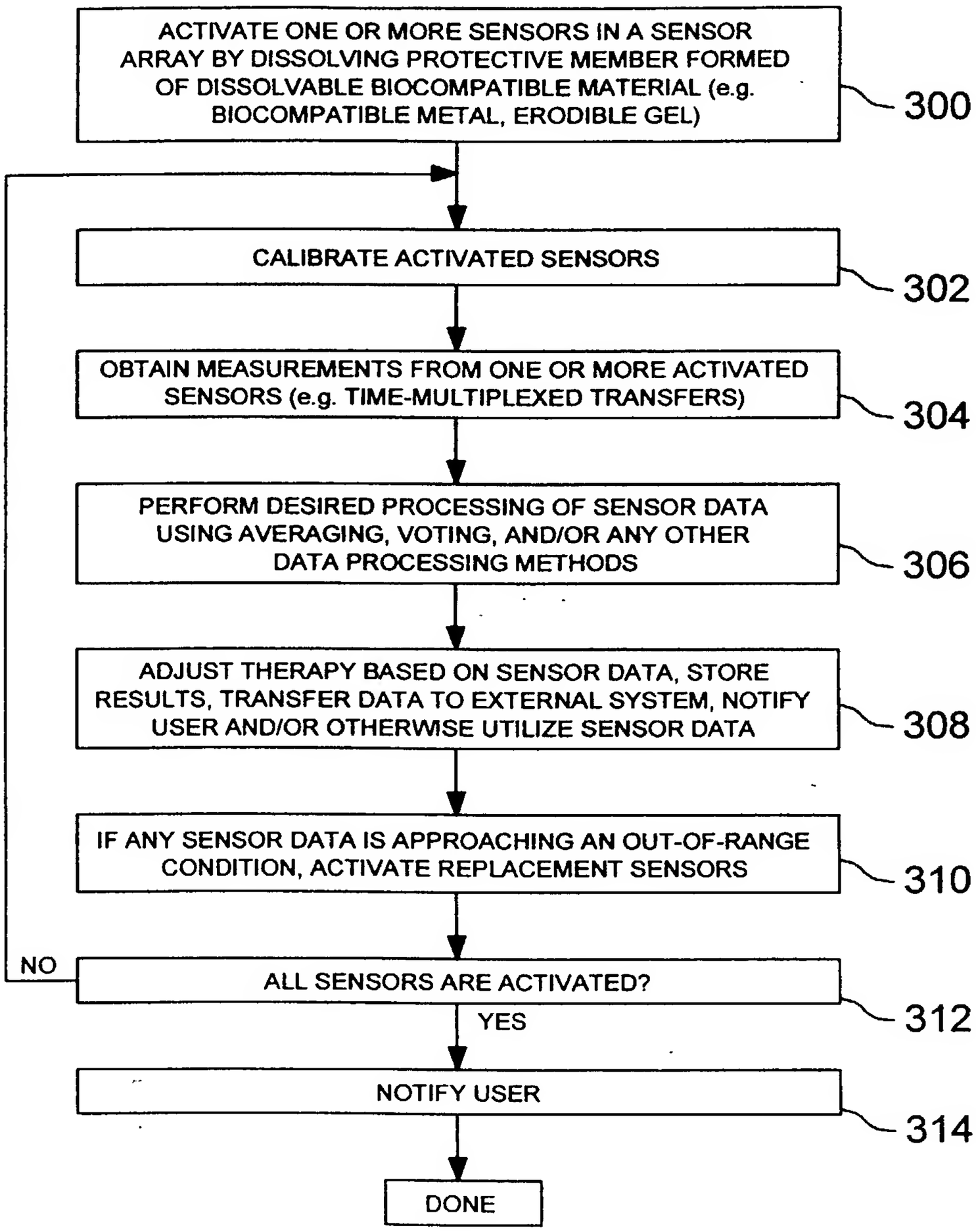
ACTIVATE ONE OR MORE SENSORS IN A SENSOR ARRAY BY DISSOLVING PROTECTIVE MEMBER FORMED OF DISSOLVABLE BIOCOMPATIBLE MATERIAL (e.g. BIOCOMPATIBLE METAL, ERODIBLE GEL)
300
CALIBRATE ACTIVATED SENSORS
302
OBTAIN MEASUREMENTS FROM ONE OR MORE ACTIVATED SENSORS (e.g. TIME-MULTIPLEXED TRANSFERS)
304
PERFORM DESIRED PROCESSING OF SENSOR DATA USING AVERAGING, VOTING, AND/OR ANY OTHER DATA PROCESSING METHODS
306
ADJUST THERAPY BASED ON SENSOR DATA, STORE RESULTS, TRANSFER DATA TO EXTERNAL SYSTEM, NOTIFY USER AND/OR OTHERWISE UTILIZE SENSOR DATA
308
IF ANY SENSOR DATA IS APPROACHING AN OUT-OF-RANGE CONDITION, ACTIVATE REPLACEMENT SENSORS
310
NO
ALL SENSORS ARE ACTIVATED?
312
YES
NOTIFY USER
314
DONE

Figure 7